

# **Environmental Activity & Sector Registry (EASR) User Guide**

**Small Ground-Mounted Solar Facilities**

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**Ontario Ministry of the Environment**  
Modernization of Approvals Branch

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# 1. Introduction

This guide has been developed to provide detailed information on the use of the Environmental Activity and Sector Registry (EASR) for the **solar industry** and other interested members of the public. It includes specific requirements for registering activities in respect of solar facilities.

The Ministry of the Environment intends to update this guide regularly to ensure that it provides accurate information and guidance for those intending to register. Website addresses and hyperlinks in this guide were current at the time of its release. Please ensure you are using the most current version of this guide by visiting the Ministry's website at: [www.ene.gov.on.ca](http://www.ene.gov.on.ca).

## 1.1 Disclaimer

While this guide is written to provide detailed information on EASR requirements in respect of solar facilities, it should not be construed as legal advice. All requirements relating to registration in the EASR are contained in Part II.2 of the Environmental Protection Act, Ontario Regulation (O. Reg.) 245/11 (Registrations Under Part II.2 of the Act – General) and O. Reg. 350/12 (Registrations Under Part II.2 of the Act – Solar Facilities). All regulations can be found at Ontario's e-Laws website ([www.e-laws.gov.on.ca](http://www.e-laws.gov.on.ca)). Note that specific references to sections of O. Reg. 350/12 are made throughout this guide, and readers are recommended to have a copy of the regulation itself in order to refer to the exact legal language when reading this guide.

## **2. Overview of the Environmental Activity and Sector Registry (EASR) – Questions and Answers**

This section presents general information about the EASR by providing answers to commonly asked questions.

### **What is the Environmental Activity and Sector Registry (EASR)?**

The Environmental Activity and Sector Registry (EASR or the Registry) is an online self-registration system implemented by the Ministry of the Environment. It replaced the previous application and review process for specific activities prescribed in regulation(s) that are considered routine, standard, and well-understood. As of November 18, 2012, certain small ground-mounted solar facilities<sup>1</sup> must register in the EASR, as per O. Reg. 350/12.

### **How does a registration in the EASR differ from an Environmental Compliance Approval (ECA) or Renewable Energy Approval (REA)?**

In general, an ECA or REA is required in order for a business to establish and operate a facility or equipment that may discharge a contaminant into the natural environment. Applying for an ECA or REA may involve the submission of various forms, design reports and studies, among other documents, to the Ministry. It is only after the review and issuance of an ECA or REA by the Director that a business may establish or use the facility or equipment. In addition, the ECA or REA may contain various conditions that will need to be followed.

However, if activities related to a facility are prescribed in regulation for the purposes of the EASR (e.g. an eligible solar facility), then an ECA or REA is not required. Instead, the activity must be registered in the EASR by filing information related to eligibility criteria described in O. Reg. 350/12. The registered facility must continually be in compliance with the eligibility criteria as well as operational requirements set out in the regulation.

### **How does a business register in the EASR?**

The EASR is online and easy to use. Businesses can register in the EASR through Service Ontario's ONE-Source for Business Portal at [www.serviceontario.ca](http://www.serviceontario.ca). The Ministry has prepared guidance documents to help navigate this online process. They are:

- How to set up a ONE-Key ID, ONE-Source profile and MOE account on Service Ontario (PIBS #9106e)
- Adding a Delegate to Your ONE-Source Profile and MOE Account on Service Ontario (PIBS #9107e)

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<sup>1</sup> The act and O. Reg. 350/12 require a person who is engaging in activities set out in the regulation at a solar facility that meet the criteria set out in the regulation to register those activities in the EASR. In this guide 'registering a solar facility' is intended to refer to the registration of activities associated with that solar facility. Reference to 'a business' is intended to be a reference to a person engaging in the activities set out in O. Reg. 350/12.

- Completing the process of becoming a delegate on Service Ontario (PIBS #9108e)

These documents, along with sample registration and request forms, can be accessed through the “Resources” page of [www.ontario.ca/environmentalapprovals](http://www.ontario.ca/environmentalapprovals).

**What happens if a solar facility meets the eligibility criteria of O. Reg. 350/12, but already has been approved with an Environmental Compliance Approval (ECA) or Renewable Energy Approval (REA)?**

If an ECA or REA issued in respect of a solar facility is in effect when the EASR solar regulation comes into force (November 18, 2012), the solar facility would not be eligible for the EASR.

**Is there any further action a business needs to take after registering an eligible solar facility?**

After registering, a business will need to ensure that the registration information filed in the EASR remains up-to-date and that the solar facility continues to meet the requirements set out in O. Reg. 350/12, including specific operational requirements. These requirements are explained in detail in the sections that follow in this guide.

If the requirements of O. Reg. 350/12 are not being met, the Ministry will take steps to bring facilities back into compliance using appropriate voluntary and mandatory compliance enforcement actions that may include the issuance of orders. All of the current compliance tools used for enforcing conditions in ECAs can be used by an Environmental Officer to enforce the regulatory requirements under EASR.

In cases where a business has shown itself to be in non-compliance with O. Reg. 350/12 or if the confirmation of registration was provided on the basis of mistaken, false or inaccurate information, the Director also has the ability to suspend or remove a registration through an order as provided for in section 20.23 of the Environmental Protection Act. If a registration is suspended or removed, the activity can no longer legally operate. A person engaged in a suspended activity can request that the suspension be ended, and the Director may also do so if he/she believes the reason for the suspension no longer exists.

### **3. Summary of O. Reg. 350/12 (Registration under Part II.2 of the Act – Solar Facilities)**

#### **3.1 Structure of O. Reg. 350/12**

The EASR regulation for solar facilities (O. Reg. 350/12) is comprised of eight sections, which are briefly summarized below:

1. Section 1 – Interpretation: This section contains definitions that are relevant to the regulation. In some definitions, reference is made to other legislation, which can be found on Ontario's e-Laws website ([www.e-laws.gov.on.ca](http://www.e-laws.gov.on.ca)), as applicable.
2. Section 2- Measurement of Distance: This section describes how distances from property boundaries and specific pieces of equipment units at the solar facility are to be measured to determine compliance with the minimum distance requirements outlined in the EASR regulation.
3. Section 3 – Prescribed Activities: This section prescribes activities related to solar facilities to be registered in the EASR, sets out the solar facility criteria and facility location criteria that must be met in order for the facilities to be registered in the EASR, and outlines the basis on which certain facilities are excluded and, therefore, not eligible to register.
4. Section 4 – Registration Exemptions: When changing a registered solar facility, this section exempts a business from having to file a new registration, so long as the facility continues to meet the eligibility criteria and has not been previously suspended or removed from the EASR.
5. Section 5 - Activity Requirements, Notice: The solar facility EASR regulation requires that notification be distributed to prescribed persons a minimum of 30 days in advance of filing a new registration or increasing a registered solar facility's name plate capacity. This section sets out requirements that must be met in order to fulfill the notification requirement of the EASR regulation. Specifically, this lays out how, when and to whom notification must be distributed.
6. Section 6 – Activity Requirements, General: This section sets out various operational requirements that must continually be met in order to remain in compliance with the EASR regulation.
7. Section 7 – Records: This section sets out various record-keeping requirements, including those related to maintenance, inspections, repairs and complaints.
8. Section 8 – Commencement: This section sets out the date O. Reg. 350/12 comes into effect.

A more detailed description of the requirements of O. Reg. 350/12 is found throughout the rest of this guide.

### **3.2 Definitions Used in O. Reg. 350/12**

Section 1 contains definitions relevant to the regulation. How specific terms in the regulation are defined affects both the eligibility criteria that a solar facility will need to meet in order to be registered as well as the operating requirements that will need to be followed if the facility is eligible. It is recommended that persons registering their solar facility read this section first before any other parts of the regulation. Where necessary, additional guidance on specific definitions in the regulation is provided throughout this guide.

## **4. Confirming that a Solar Facility is Eligible for the EASR**

### **4.1 Introduction**

The EASR is a new approval pathway for specific prescribed activities that would otherwise require an Environmental Compliance Approval (ECA) or Renewable Energy Approval (REA). The prescribed activities set out in O. Reg. 350/12 are the construction, installation, use, operation, changing or retiring of a solar facility that meets the eligibility criteria set out in subsection (2) of the regulation, and is situated at a facility location that meets the criteria set out in subsection (4) if:

- The solar facility discharges a contaminant into the natural environment other than water; or
- The electricity generated at the solar facility is sold by the owner or operator of the facility.

For the purposes of registering in the EASR, a solar facility means a renewable energy generation facility at which one or more solar photovoltaic collector panels or devices use light to generate electricity. These facilities are typically comprised of solar photovoltaic collector panels/modules, mounting apparatuses and ancillary electrical equipment to invert, transform and distribute generated electricity to the distribution system of the local distributor.

**What are my obligations if my solar facility does not meet the eligibility criteria set out in the EASR regulation?**

If the eligibility criteria of O. Reg. 350/12 are not met, you may instead be required to obtain a Renewable Energy Approval (REA). Detailed information on the REA process can be found by visiting the Ministry's Renewable Energy [webpage](#) or by consulting the [Technical Guide to Renewable Energy Approvals](#).

**If I currently have a FIT 1.0 contract from the Ontario Power Authority (OPA), is my solar facility eligible to register in the EASR?**

A solar facility operating under FIT 1.0 rules is eligible to be registered in the EASR if the facility meets the eligibility criteria set out in O. Reg. 350/12.

The prescribed activities must be registered in the EASR if both the solar facility and facility location meet the eligibility criteria set out in section 3 of O. Reg. 350/12. These criteria are described in this chapter to assist potential registrants determine whether their facility is eligible. In general, businesses intending to register will need to determine if their facilities meet all of the criteria, which can be summarized broadly in the following four categories:

1. General Eligibility Criteria.
2. Eligibility Criteria Related to Project Location Land Use and Size
3. Eligibility Criteria Related to Noise Generating Equipment at the Facility
4. Eligibility Criteria Related to Natural and Cultural Heritage

The sections below provide more information about each of these categories of eligibility criteria.

If a facility cannot be registered, it still may require a Renewable Energy Approval (REA). For additional information about REAs, businesses are encouraged to review the [Renewable Energy Technical Guide](#) or contact the Ministry for further assistance.

## 4.2 General Eligibility Criteria

O. Reg. 350/12 sets out the criteria described below that must be met in order for a solar facility to be eligible to be registered in the EASR. Reference to the applicable provision in O. Reg. 350/12 has been provided.

- The solar facility must have ground-mounted solar photovoltaic collector panels (O. Reg. 350/12, paragraph 1 of subsection 3 (2)).** As a starting point, solar photovoltaic collector panels at an eligible solar facility must be mounted on the ground, typically on concrete pads. A solar facility with solar photovoltaic panels that are constructed on the roof or wall of a building would not be eligible.
- The solar facility must have a name plate capacity between 10 and 500 kilowatts (O. Reg. 350/12, paragraph 2 of subsection 3 (2)).** O. Reg. 350/12 limits the allowable size of the solar facility in a number of ways – first, in terms of its total name plate capacity. Name plate capacity means the lesser of the total of the design electricity generating capacities of all the generation units in or at the facility and the maximum power output of all of the inverters in or at the facility. In other words, the name plate capacity would be measured as either the capacity coming from the solar photovoltaic collector panels (“generation units”) before any losses through an inverter or the total power output generated from the inverters on site, whichever is less. In order to register, a solar facility must have a name plate capacity that is rated greater than 10 kilowatts (kW) and less than or equal to 500 kW. This rating is typically provided by the manufacturer of the solar photovoltaic collector panels.
- The solar facility must not have obtained a Renewable Energy Approval (REA) or Environmental Compliance Approval (ECA) from the Ministry (O. Reg. 350/12, paragraph 3 and 4 of subsection 3 (6)).** A facility that is the subject of an Environmental Compliance Approval (ECA) or Renewable Energy Approval (REA) that is in effect on the day O. Reg. 350/12 comes into force (November 18, 2012) is not required to register in the EASR. If a solar facility is the subject of an approval when the regulation comes into force, it would continue to be subject to the conditions of its ECA or REA, as applicable.

I have already initiated the Renewable Energy Approval (REA) process for my facility.  
Am I eligible to register in the EASR?

If your facility meets the eligibility criteria set out in the EASR regulation, and you have not been issued a REA on or before the date the EASR regulation comes into force, your facility must be registered in the EASR.

- The solar facility must include transformers less than or equal to 750 kilovolt-amperes (kVA) (O. Reg. 350/12, paragraph 3 of subsection 3 (2)).** The maximum power output capacity of each transformer that is part of the solar facility must be less than or equal to 750 kVA.
- The solar facility must not include distribution lines that are associated or ancillary to the facility, except distribution lines used to distribute electricity within the facility, or an off-property distribution lines up to 2 kilometres in length (O. Reg. 350/12, paragraph 1 of subsection 3 (6)).** A number of ancillary or associated equipment, services or technologies may be part of a solar facility for the purpose of generating electricity (prescribed in O. Reg. 160/99 (Definitions and Exemptions) made under the Electricity Act, 1998). However, the scope of ancillary or associated equipment, services or technologies eligible for the purposes of registering a facility in the EASR is restricted only to:

- Transportation system(s) to provide access to the facility (e.g. access roads). These must be located on the same property that the solar photovoltaic collector panels are located
- Transformer stations or distribution stations
- Distribution lines used to distribute electricity within the solar facility
- Off-property distribution lines that do not exceed two kilometres (km) in length

An off-property distribution line is one that is not located on the same property as the solar facility's solar photovoltaic collector panels, and that is solely used to distribute electricity from the solar facility to the distribution system of the distributor that is responsible for the service area in which the facility is located. It is intended that the off-property distribution line be measured from the point at which the line crosses the solar facility's property boundary to the point at which it connects to the local distribution system.

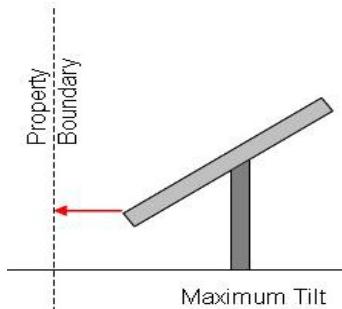
A solar facility that includes any off-property distribution lines greater than 2 km would not be eligible to register in the EASR. A solar facility that includes any transmission lines would also not be eligible.

As a best practice, distribution lines (both within the facility and those off-property up to 2 km in length) should be planned to ensure the efficient use of land and connection infrastructure. Distribution lines should also be sited to ensure minimal environmental impact on the surrounding natural and man-made environment. When designing a solar facility, consideration should be given to siting and routing practices that identify and mitigate where possible any potential distribution line impacts to natural heritage features (e.g. significant woodlands, significant wildlife habitat) as well as the aesthetic of the surrounding area.

A business should also be aware that there are a number of requirements that do not apply in respect of the land associated with an off-property distribution line, which are highlighted throughout this guide.

- The distance between each solar photovoltaic collector panel must be a minimum 15 metres from the facility property boundary (O. Reg. 350/12, paragraph 7 of subsection 3 (2)).** Every solar photovoltaic collector panel must be a minimum of

15 metres from the property boundary of the solar facility. Collector panels must be at maximum tilt when the distance is being measured (see illustration to the right). To determine compliance with this requirement, a business must measure from the point that is located on the edge of the panel and closest to the property boundary of the facility to the point on the property boundary of the facility closest to the point where the measurement originated from.



**The solar facility must comply with any permit requirements under the Niagara Escarpment Planning and Development Act (NEPDA) (O. Reg. 350/12, paragraph 5 of subsection 3 (2)).** Solar facilities located in an area of development control within the Niagara Escarpment Planning Area may require a development permit (as per section 24 of the Niagara Escarpment Planning and Development Act). If a permit is required, the permit must have been issued and the requirements of O. Reg. 350/12 must not conflict with any conditions of the permit in order for the solar facility to be eligible for registration.

To determine if a solar facility is located within the Niagara Escarpment Planning Area, a business can either download Plan Maps at [www.escarpment.org](http://www.escarpment.org), or contact a planner at the Niagara Escarpment Commission for further information.

#### A Note on Additional Permits

There is a range of additional provincial and federal agencies that may require specific permits during the construction, operation or decommissioning of a solar facility that are not explicitly prescribed in the EASR regulation, such as those required under the Endangered Species Act, 2007 or Ontario Heritage Act. These permits are outlined in section 5.1 (Determining if Additional Permits Are Required) of the [Technical Guide to Renewable Energy Approvals](#). Note that while every attempt has been made to make this a complete list, businesses are responsible for determining their legal obligations. Contact information for most agencies cited can be found in Appendix 2 of the same [Guide](#).

**The solar facility must not have been previously exempted from requiring an environmental approval from the Ministry (O. Reg. 350/12, paragraph 5 of subsection 3 (6)).** Provisions exist in the EASR regulation to maintain consistency with the Environmental Protection Act's current exemptions from the requirement for approval. Specifically, a solar facility is not eligible for the EASR if it is:

- Associated with a building or structure that contains one or more dwellings, and is used by the occupants of not more than three dwellings in the building or structure.
- Used in agriculture where the electricity generated is not sold by the owner or operator of the facility.

### 4.3 Eligibility Criteria Related to Project Location Land Use and Size

Subsection 3 (4) of O. Reg. 350/12 sets out criteria related to siting and land use that the facility location will need to satisfy in order to register in the EASR. The facility location is to be interpreted in the broadest sense – that is, any part of land and/or structure on or over which the solar facility is being constructed, installed, used, operated, changed or

retired. Unless otherwise noted, the facility location includes not just the physical footprint of the solar photovoltaic collector panels and applicable ancillary equipment, but also any land and/or airspace beyond this footprint that was or will be used throughout the project lifecycle. In practice, this means that the facility location can be larger than the solar facility itself. For instance, if vehicles are intended to access the land that extends beyond the perimeter of the collector panels for routine inspection and maintenance, this land must be considered as part of the facility location.

The policy intent of O. Reg. 350/12 is to restrict eligibility to solar facilities that are located only on previously developed and/or disturbed land. As such:

**The solar facility location must be restricted to specified land uses and sizes (O. Reg. 350/12, subsection 3 (4)).** Eligible solar facilities must meet the criteria set out in subsection 3 (4), meaning that they are situated on a facility location that meets one of the criteria set out in Table 1:

**Table 1 – Siting Restrictions (O. Reg. 350/12 subsection 3 (4))**

|   | Facility Location Criteria  | Area of Facility Location      |
|---|---|--------------------------------|
| <b>1.</b><br><i>Paragraph 1 of subsection 3 (4)</i> | The facility location is situated on property that is zoned for industrial, commercial or institutional (ICI) use and either: <ul style="list-style-type: none"> <li>i. Is used for the use for which it is zoned, or</li> <li>ii. Has a concentration of a contaminant in the soil that exceeds the soil standard for subsurface soil for that contaminant set out in Table 5 of the Ministry's publication "Soil, Ground Water and Sediments Standards" that is applicable to the use for which the property is zoned.</li> </ul> | No greater than four hectares  |
| <b>2.</b><br><i>Paragraph 2 of subsection 3 (4)</i> | The facility location is situated on land that is used for a farm operation activity and is not part of an area of settlement within the meaning of the Planning Act.   | No greater than three hectares |

Detailed descriptions of each of the above-noted scenarios are given below. It is important to note also that businesses considering applying for a Feed-In Tariff (FIT) contract should also review the FIT rules for land use and project siting. More information on the FIT program can be found at [www.powerauthority.on.ca](http://www.powerauthority.on.ca).

**Can my solar facility be electrically integrated with solar facilities located on nearby properties?**

No. The EASR regulation prohibits solar facilities from being located on more than one property. If a solar facility is integrated with a facility located on a nearby property, it would be considered to be located on more than one property and would not therefore be eligible.

Note, however, that your solar facility can be located on a property that has other facilities located on the same property if it meets the requirements out in O. Reg. 350/12, paragraph 2 of subsection 3(6).

**Industrial, Commercial or Institutional Land Being Used for the Use for which it is Zoned**

In this scenario, a solar facility would be eligible if it is situated on property that is zoned and used for ICI purposes. It is anticipated that the solar facility therefore would provide

a secondary use of the property which may already be used for such purposes as manufacturing, warehousing, office spaces, retail activities and university or college facilities, as examples. A business must obtain any applicable approvals from the owner/property manager to ensure that the area can be used for the secondary purposes of installing a solar facility.

As specified in Table 1, the area of the facility location must not exceed four hectares, excluding the land associated with an off-property distribution line, if applicable.

**Industrial, Commercial or Institutional Land where the Concentration of Contaminants in the Soil Exceed the Applicable Limits**

The solar location could be situated on a property zoned for an ICI use that has a concentration of a contaminant that exceeds the soil standard for subsurface soil for that contaminant set out in Table 5 of the Soil, Ground Water and Sediment Standards (PIBS # 7382e01) for the use for which the property is zoned. To make this determination, a business would need to carry out an environmental site assessment. The site assessment involves the study of a property to determine if contaminants are present and if so, the location and concentration of these contaminants. In addition, an environmental site assessment includes the completion of a report documenting the study results, which is to be retained by the business to comply with ongoing operational EASR requirements.

For further information, businesses are encouraged to consult the Ministry's resources on brownfields and contaminated sites. Some of these materials include:

- Fact Sheet: Understanding Brownfields Standards (PIBS # 7757e)
- Guide for Completing Phase One Environmental Site Assessments under Ontario Regulation 153/04 (PIBS # PIBS 8485e)
- Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04 (PIBS # PIBS 8486e)

As specified in Table 1, the area of the facility location must not exceed four hectares, excluding the land associated with an off-property distribution line, if applicable.

**Farm Operation Activity**

In this scenario, a facility location would be eligible for the purposes of the EASR if the facility location is proposed to be situated on land that is used for a farm operation activity. Subsection 1 (1) of Regulation 347 provides that the following activities are farm operation activities:

1. Growing, producing or raising farm animals.
2. The production of agricultural crops, including greenhouse crops, maple syrup, mushrooms, nursery stock, tobacco, trees and turf grass.
3. The processing, by the operator of the farm operation, of anything mentioned in paragraphs 1 and 2, where the processing is primarily in relation to products produced from the agricultural, aquacultural or horticultural operation.
4. The use of transport vehicles by the operator of the farm operation, to transport anything mentioned in paragraphs 1 and 2, where the use of transport vehicles is

primarily in relation to products produced from the agricultural, aquacultural or horticultural operation.

To be eligible, the solar facility location, excluding the land associated with an off-property distribution line, must also not be part of an area of settlement within the meaning of the Planning Act. More specifically, “area of settlement” is defined in the Planning Act to mean an area of land designated in an official plan for urban uses. This includes urban areas, urban policy areas, towns, villages, hamlets, rural clusters, rural settlement areas, urban systems, rural service centres or future urban uses areas, or as otherwise prescribed by regulation.

Official plans outline how land in local communities should be used, and a business should contact the clerk or planning department of any relevant upper, lower or single-tier municipalities within which the project location is situated for more information.

As specified in Table 1, the area of the facility location must not exceed three hectares, excluding the land associated with an off-property distribution line.

**Note:** As a best practice, solar facilities on land used for farm operation activities should be designed, constructed and rehabilitated such that permanent impacts to the agricultural capability of the land are mitigated where possible. For instance, ground-levelling and off-site removal of topsoil should be minimized. If soil is removed, it should be stockpiled separately for future restoration.

**Can I register activities relating to a solar facility if there are one or more solar facilities already located on my proposed facility location?**

A solar facility can be located on a single property with multiple projects so long as:

- The total name plate capacity of all the solar facilities on the property does not exceed 500 kW
- The total area of all the facility locations does not exceed four hectares if the property is zoned for industrial, commercial or institutional use
- The total area of all the facility locations does not exceed three hectares if the property is used for a farm operation activity.

**A large solar facility is proposed to be built on the same property as my solar facility which is already registered in the EASR. The total name plate capacity of both facilities would be greater than 500 kW, which is the uppermost limit for EASR eligibility. Is my registered solar facility no longer eligible?**

Once registered, your eligibility cannot be affected by separate solar facilities that may be built on or near your property. In the scenario described, your solar facility would continue to be eligible so long as the facility continues to meet the requirements of O. Reg. 350/12. The proposed facility would be required to proceed through the REA process.

#### **4.4 Eligibility Criteria Related to Noise Generating Equipment at the Facility**

O. Reg. 350/12 sets out specific criteria related to noise generating equipment at the solar facility that must be met in order to be eligible for the EASR. These criteria are intended to mitigate potential noise impacts from a solar facility registering in the EASR and are summarized below:

**Each noise generating equipment unit at the solar facility must have a sound power level that is less than or equal to 90 dBA (O. Reg. 350/12, paragraph 4 of subsection 3 (2)).** As a starting point, any noise generating equipment unit – that is, a transformer, inverter or solar facility electrical unit (a unit which houses any combination of transformers, inverters or both) – must not have a sound power level that is greater than 90 decibels (dBA). It is important to note that the 90 dBA limit includes a 5 dbA tonal penalty. A business must confirm that this requirement has been met by referring to the manufacturer's specification of the equipment. If a 5 dBA tonal penalty has not been included in the equipment specification, a 5 dBA adjustment must be made to the listed sound power level. There is no individual sound power level requirement for micro-inverters on the basis that the noise emitted from this equipment is negligible.

**Noise from the solar facility must be mitigated through noise control criteria (O. Reg. 350/12, paragraph 6 of subsection 3 (2) and subsection 3 (3)).** In addition to confirming that the solar facility's noise generating equipment unit(s) meet the 90 dBA sound power level threshold, a business must ensure that the applicable minimum setback distance from each noise generating equipment unit to the property boundary of any noise receptor is satisfied. These distances are set out in paragraph 6 of subsection 3 (2) of O. Reg. 350/12. The minimum distances are based on the sound power level of the facility's noise generating equipment units – the greater the sound power level of the unit, the further the facility must be from the property boundary of nearby receptors.

**Table 2 - Noise Setbacks (O. Reg. 350/12 paragraph 6 of subsection 3 (2))**

| Item | Column 1   | Column 2     |
|------|--|--------------|
|      | Sound power level of noise generating equipment unit (dBA) | Distance (m) |
| 1.   | ≤ 65   | 10           |
| 2.   | > 65 to ≤ 70   | 20           |
| 3.   | > 70 to ≤ 75   | 30           |
| 4.   | > 75 to ≤ 80   | 55           |
| 5.   | > 80 to ≤ 85   | 100          |
| 6.   | > 85 to ≤ 90   | 180          |

The applicable setback is to be determined by measuring horizontally from the edge of any noise generating equipment unit to the property boundary of the closest noise receptor. In making the determination as to whether a solar facility meets the specified minimum setback distance between a noise generating equipment unit and a property boundary of a noise receptor, a business should remember that a noise receptor does not include one that is located on the parcel of land on which any part of the solar facility is or will be located.

For the purposes of registering on the EASR, a noise receptor is defined as a:

- Permanent or seasonal residence
- Hotel/motel
- Long-term care home/retirement home
- Hospital
- Campground
- Child care facility
- Educational facility

- Place of worship

Any nearby vacant lot that has been zoned to permit the development of any of the above-listed buildings or campground would also be considered a noise receptor for the purposes of registering on the EASR.

#### Noise Specification Option

Subsection 3 (3) of O. Reg. 350/12 specifies that a solar facility is not required to meet the noise setbacks outlined above if the noise discharged from the facility does not result in a sound pressure level above specified levels at the property boundaries of nearby noise receptors. This option allows for greater design flexibility, ensuring that businesses with uniquely constrained properties are not excluded from EASR eligibility on the basis of being unable to meet hard setbacks.

For the purposes of subsection 3 (3) of O. Reg. 350/12, noise setbacks in the regulation are not required to be met if the sound discharged from the solar facility does not result in a sound pressure level at the boundary of any noise receptor that exceeds:

- 40 dBA; or
- The lowest hourly ambient sound pressure level at the property boundary if greater than 40 dBA (without noise from the solar facility itself)

Under the Ministry noise guidelines, the ambient sound level should be interpreted to mean background noise or the sound level that is present in the environment and produced by noise sources other than the solar facility. Highly intrusive short duration noise caused by sources such as aircraft fly-over or train pass-by is typically excluded from the determination of the background sound level.

In meeting this requirement, any number of noise control measures such as silencers, acoustical louvers, barriers, berms, screening and/or acoustic enclosures, may be incorporated as part of the solar facility's design. It is also expected that the noise generating equipment units be appropriately maintained through the life cycle of the facility. For example, if wear of any equipment changes the level of noise experienced at receivers, this change must be mitigated and/or repaired to maintain compliance with subsection 3 (3) of O. Reg. 350/12.

To demonstrate compliance with subsection 3 (3) of O. Reg. 350/12, a professional engineer, or person working under the supervision of a professional engineer, must be retained to conduct analysis of the noise at the facility location and prepare a report concluding that the sound discharged from the facility is within the allowable limits. Note that any noise analysis prepared by a person working under the supervision of a professional engineer should contain certification demonstrating that it was prepared or reviewed by a professional engineer. O. Reg. 350/12 defines professional engineer to mean a person who holds a licence, limited licence or temporary licence under the Professional Engineers Act.

It is expected that the information considered as part of the noise analysis is consistent with applicable Ministry noise guidelines. A more detailed description of the information that the Ministry would expect to be included in noise study reports, as well as modelling instructions can be found in Chapter 9 of the [Renewable Energy Technical Guide](#).

## **4.5 Eligibility Criteria Related to Natural and Cultural Heritage**

Subsection 3 (8) of O. Reg. 350/12 set out specific criteria related to natural and cultural heritage that must be met in order to be eligible for the EASR. These criteria are summarized below:

**The solar facility location must not be within 30 metres of a water body (O. Reg. 350/12, paragraph 2 of subsection 3 (8)).** To protect shoreline vegetation, paragraph 2 of subsection 3 (8) restricts eligible solar facilities from being situated on a facility location that is within 30 metres of a water body. For the purposes of the EASR, a water body has the same meaning as in O. Reg. 359/09, which is a lake (including kettle lakes and Lake Trout lakes), permanent stream, intermittent stream and seepage area, but does not include:

- Grassed waterways,
- Temporary channels for surface drainage, such as furrows or shallow channels that can be tilled and driven through,
- rock chutes and spillways,
- Roadside ditches that do not contain a permanent or intermittent stream,
- Temporarily ponded areas that are normally farmed,
- Dugout ponds, or
- Artificial bodies of water intended for the storage, treatment or recirculation of runoff from farm animal yards, manure storage facilities and sites and outdoor confinement areas.

Specific terms related to water bodies are defined in O. Reg. 359/09, and briefly summarized below.

Kettle lakes are defined to mean a depression formed by glacial action and permanently filled with water. A Lake Trout lake at or above development capacity is defined to mean a lake that has been designated by the Ministry of Natural Resources (MNR) for lake trout management. Development capacity is defined as having dissolved oxygen content of 7 mg/l. Permanent streams are defined to mean those that continually flow during an average year. An intermittent stream, by contrast, is defined to mean a natural or artificial channel, other than a dam, that carries water intermittently and does not have established vegetation within the bed of the channel, except vegetation dominated by plant communities that require or prefer the continuous presence of water or continuously saturated soil for their survival. Seepage areas are defined to be sites where ground water emerges and the water table is present at the ground surface including springs.

The setbacks for lakes and streams, both permanent and intermittent, should be measured from the average annual high water mark. For the purposes of registering in the EASR, the average annual high water mark for streams means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land. In flowing waters this refers to the active channel/bankfull level which is often the one-to two-year flood flow return level. For inland lakes, the average annual high water mark refers to those parts of the water body bed and banks that are frequently flooded by water so as to leave a mark on the land and where the vegetation changes from predominately aquatic vegetation to terrestrial

vegetation (excepting watertolerant species). For reservoirs (or controlled lakes), the average annual high water mark refers to normal high operating levels (adapted from Fisheries and Oceans Canada, 2009). For projects within the Lake Simcoe watershed area, in determining the average annual high water mark, applicants should take into consideration the “Lake Simcoe shoreline” definition provided in the Lake Simcoe Protection Plan.

This approach is consistent with the definitions provided in the policies made under the Public Lands Act and the MNR’s “Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement” 2005 publication, Second Edition (this publication is available from the MNR’s website).

**The solar facility location must not be within areas of cultural heritage significance (O. Reg. 350/12, paragraph 1 of subsection 3 (8)).** To mitigate potential impacts to cultural heritage resources, solar facilities must meet additional siting restrictions. The presence of an archaeological site – any property that contains an artifact or physical evidence of past human use or activity that is of cultural heritage value or interest – is a strong indicator of archaeological potential. For this reason, the solar facility must not be situated on a facility location that is within 250 metres of an archaeological site (as defined in O. Reg. 170/04 (Definitions) made under the Ontario Heritage Act) recorded by the Ministry of Tourism, Culture and Sport (MTCS) at the time of construction or change. A business must confirm that the solar facility is not situated within 250 metres of any archaeological sites by contacting the Archaeological Sites Database Coordinator. For more information, a business should refer to the MTCS website at [www.ontario.ca/archaeology](http://www.ontario.ca/archaeology).

Archaeological management plans are put in place by municipalities to identify and map known archaeological sites, areas of archaeological potential and archaeologically sensitive areas (e.g. cemeteries) to guide land development activities. A business must ensure that the proposed facility location is not situated in an area of archaeological potential identified by a municipality on an archaeological management plan at the time of construction or change. Businesses can determine if there is an archaeological management plan in place by contacting the lower and/or upper-tier municipality in which the facility is located.

**What if I find previously undocumented archaeological resources during the construction of my registered facility?**

Should previously undocumented archaeological resources be discovered at any time during the construction or ongoing operation of the facility, this may indicate a new archaeological site which would be subject to subsection 48 (1) of the Ontario Heritage Act. The person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork and/or a full archaeological assessment.

You can find consultant archaeologists and archaeological consulting companies by searching “Ontario archaeological consultant” on the Internet or by referring to the Ontario Association of Professional Archaeologists [website](#) for a partial list.

Additionally, solar facilities registering in the EASR cannot be built on a facility location that is situated where a national historic site is located at the time of construction or

change. Businesses can determine if there is a national historic site on the facility's property by contacting Parks Canada, MTCS, and/or the municipality in which the facility is located.

As applicable, a business must keep records of any correspondence received from municipalities, MTCS and Parks Canada confirming that the solar facility meets the cultural heritage requirements, as part of the ongoing record-keeping requirements of the EASR regulation. For more information, refer to Table 3 in the "Operating Requirements for Eligible Solar Facilities" section of this guide.

It is important to note that it is the responsibility of businesses to ensure that, prior to registering their solar facility in the EASR, they obtain all applicable municipal approvals including those required for properties protected under the Ontario Heritage Act prior to registering their solar facility in the EASR.

#### **A Note on Protected Properties**

It is the responsibility of a business to ensure that it obtains all applicable approvals and permits required for properties protected under the Ontario Heritage Act prior to registering their solar facility in the EASR. This includes properties protected by a municipal easement, properties that are designated under the Ontario Heritage Act, or where a notice of intention to designate has been issued, and properties that are located within a Heritage Conservation District.

Properties protected by an easement with the Ontario Heritage Trust must receive authorization from the Trust prior to registering their project on the EASR site. Businesses should contact the Ontario Heritage Trust for more information.

In a few cases there may also be authorization from the Ministry of Tourism, Culture and Sport. Further detail on heritage approvals and authorizations are outlined in Appendix B of the MTCS guidance document: Cultural Heritage Resources – An Information Bulletin for Projects Subject to Ontario Regulation 359/09 – Renewable Energy Approvals.

## **5. Operating Requirements for Eligible Solar Facilities**

The construction, installation, use, operation, changing or retiring of a solar facility that meets the eligibility requirements outlined above must be registered in the EASR. The next section of this guide describes the mandatory operating requirements that must continually be met for solar facilities that meet the eligibility criteria.

### **5.1 Registering the Solar Facility**

One key mandatory requirement for all EASR-eligible activities is that the business registers the activity in the EASR. This requirement is from clause (a) of subsection 20.21 (1) of the Environmental Protection Act.

Registration in the EASR is an on-line process through the Government of Ontario's One-Source for business portal. The registration process involves setting up a business profile with contact information and confirming eligibility by answering questions about the solar facility. Questions are also posed to the business for the purpose of collecting additional information about the facility that may assist the Ministry in auditing registrations or conducting other compliance enforcement activities. The information also benefits the public who may locate information in the EASR through a search of the Ministry's [Access Environment](#) website.

Once registered, the business must ensure that the information filed in the Registry remains complete and accurate. If any information submitted at the time of registration changes the registrant must update this information within 30 days after the day the person becomes aware that the information is no longer complete or accurate. This requirement is from subsection 3 (1) of O. Reg. 245/11 under the Environmental Protection Act.

### **5.2 Requirement Related to Notification**

It is important that local communities are aware of nearby solar facilities, and are empowered to understand the rules that govern the construction, installation, use, operation or changing of them. The Ministry expects that proponents of solar facilities will act as good neighbours in their communities by keeping open lines of communication about the project, answering questions as needed and constructively responding to any complaints received. To facilitate this, subsection 5 (1) of O. Reg. 350/12 requires a business to distribute written notice to specified persons at least 30 days prior to registering in the EASR or prior to increasing the name plate capacity of an already registered facility (up to 500 kW). These persons are:

- Every owner or occupant of a property adjacent to the property on which the facility location is situated. Note that O. Reg. 350/12 provides that two properties are considered adjacent to each other if the boundary of one property touches the boundary of another. Properties whose boundaries would touch were it not for an intervening highway, road allowance, railway line, railway allowance, or utility corridor are also considered adjacent.
- The clerk of each local municipality and upper-tier municipality in which the facility is situated.

- The secretary of each Local Service Board of a board area in which the facility is situated.
- The secretary-treasurer of a planning board that has jurisdiction in an area in which the facility is situated.
- The chair of the Niagara Escarpment Commission, if the facility location is situated in the Niagara Escarpment Planning Area.
- The secretary of every company operating an oil or gas natural pipeline, if a pipeline right of way is located within 200 metres of the facility location.

Subsection 5 (1) also stipulates that notification must be distributed to the persons listed above in a form approved by the Director. As such, the Ministry has developed, and the Director has approved a standard Notification Form that is to be used by businesses to fulfill the notification requirement. The Notification Form is available on the Ministry's [website](#) and a business should confirm that they are using the most up-to-date version. The form includes a standard overview of the EASR process, as well as basic facility and contact information that is to be filled out by the individual business prior to distribution. Specifically, the business must provide the project name and owner, name plate capacity, area of facility location, project location, and the most appropriate contact person for the facility (typically either the owner or operator) including telephone number, fax number, e-mail and mailing addresses.

A detailed map must also be attached to the form which clearly shows the location of the facility on the property in relation to surrounding land uses. This includes the location (proposed or otherwise) of all facility equipment, such as transformers, collector panels, inverters, access roads and distribution lines associated with the solar facility, as well as nearby buildings, roads, utility corridors, rights of way and noise receptors.

**How do I demonstrate that the notification form was distributed a minimum of 30 days prior to registering or increasing the name plate capacity of my facility (up to 500 kW)?**

The notification form is available from the Ministry's website in a downloadable PDF format which can be saved to your local hard drive. For compliance purposes, you must retain a dated copy of the form that was distributed. In addition, it is recommended that you retain a list of the names and contact information of those persons whom the notification form was distributed to.

### **5.3 General Activity Requirements**

A solar facility registered in the EASR must continually meet the activity requirements outlined in section 6 of O. Reg. 350/12 to ensure that potential environmental impacts from routine operation are mitigated. These requirements are summarized below:

- Each component of the solar facility must be used, operated, maintained and retired in a manner that satisfies the recommendations of the manufacturer of the component.
- External light fixtures at the solar facility must be full cutoff light fixtures (i.e. no uplight) as specified by the manufacturer. This requirement is intended to mitigate light trespass to neighbouring properties and any potentially negative impacts on the nighttime environment.

- As soon as construction begins, a sign must be posted in a prominent location of the solar facility – likely on or near the property’s frontage – that displays contact information of the facility’s owner or operator, whichever is more appropriate. The sign must also identify the name and contact information of a person to contact in an emergency.
- No more than 50,000 litres of water can be taken on any day for the purposes of the construction, use, operation, changing or retiring of the solar facility.
- The district manager of the Ministry of the Environment’s district in which the facility is located must be notified within two business days of a receiving a complaint about the facility that is related to the natural environment.

#### **Do I need to meet any requirements related to groundwater monitoring?**

No. Water taking within the 50,000 L/day limit is considered to be of minimal environmental risk and is consistent with the thresholds for other environmental permits. A solar facility that engaged in water taking beyond this limit would require a Permit to Take Water and would not therefore be eligible.

#### **A Note on Decommissioning**

While the manufacturer recommendations may not explicitly deal with retiring the facility, it is expected that environmentally responsible decommissioning is planned for and takes place at the end of the facility’s life. This could involve the removal of solar photovoltaic collector panels, mounts, supporting structures, transformers, inverters, distribution lines and/or access roads (in consultation with the landowner, if applicable). Underground mounts, supporting structures, electrical connections and foundational structures should also be removed in a way that minimizes other potential negative environmental effects. Every effort should be made to restore the site to its original capability/use. Some restoration activities that may be considered include, but are not limited to, removing all non-native material placed in the project location area including stone, concrete and asphalt, and mitigating any removed topsoil, altered drainage systems and/or compacted soil.

## **5.4 Documentation Requirements**

To facilitate compliance, the EASR regulation sets out the types of records that must be retained. A business is required to retain records such that they can make the records available for inspection upon request by a provincial officer – likely however, this will be at the facility location. The requirements for these records are outlined in section 7 of O. Reg. 350/12 and are summarized below:

**Table 3 – Records Required by O. Reg. 350/12**

| Record                                     | Description  | Retention Period                                    |
|--|--|---|
| <b>Inspection, Maintenance and Repairs</b> | <p>A record of the following information with respect to inspections, maintenance and/or repairs to any noise generating equipment units, micro-inverters, and/or solar photovoltaic collector panels located at the solar facility:</p> <ul style="list-style-type: none"> <li>• Date and summary of the inspection, maintenance or repair</li> <li>• Name of the person who performed the</li> </ul> | Minimum of 5 years from the day record was created. |

|   |  |  |
|---|--|--|
|   | <p>inspection, maintenance or repair and the name of their employer, if applicable</p> <ul style="list-style-type: none"> <li>• A summary of any unsatisfactory conditions observed and the steps which were taken to correct them</li> </ul> <p><u>See paragraph 1 of subsection 7 (1) of O. Reg. 350/12.</u></p>   |  |
| <b>Inspection, Maintenance and Repairs – Supporting Documents</b> | <p>A copy of every document related to each inspection, maintenance and/or repair, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Inspection reports</li> <li>• Maintenance schedules</li> <li>• Invoices</li> <li>• Receipts</li> <li>• Bills of Lading</li> </ul> <p><u>See paragraph 2 of subsection 7 (1) of O. Reg. 350/12.</u></p>  | Minimum of 5 years from the day record was created.  |
| <b>Complaints</b>   | <p>A record of the following information with respect to complaints about the solar the solar facility that relate to the natural environment:</p> <ul style="list-style-type: none"> <li>• The date and time each complaint was received</li> <li>• A record describing the complaint. If the complaint was received as correspondence, the correspondence should be retained as well.</li> <li>• A summary of the measures taken, if any, to address the complaint. This should include any correspondence issued to the complainant as well as records of any other communications such as phone calls or messages.</li> </ul> <p><u>See paragraph 3 of subsection 7 (1) of O. Reg. 350/12.</u></p>       | Minimum of 5 years from the day record were created. |
| <b>Equipment Specifications</b>                                   | <p>A business must retain documentation from the manufacturer of the solar photovoltaic collector panels and inverters that confirm that the name plate capacity of the solar facility is greater than 10 kW but less than or equal to 500 kW. See paragraph 1 of subsection 7 (2) of O. Reg. 350/12.</p> <p>Business must also retain all documents relating to the manufacturer recommendations of any noise generating equipment units, micro-inverters and/or collector panels, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Equipment manuals, handbooks or guides</li> <li>• Warranties</li> </ul> <p><u>See paragraph 2 of subsection 7 (2) of O. Reg. 350/12.</u></p> | During the life of the equipment.                    |
| <b>Cultural Heritage Requirement Confirmations</b>                | <p>A business will need to retain all documents confirming that the cultural heritage requirements of O. Reg. 350/12 have been met. Specifically, a business is required to have documents from:</p>   | During the life of the solar facility.               |

|   |  |  |
|---|--|--|
|   | <ul style="list-style-type: none"> <li>• The Ministry of Tourism, Culture and Sport confirming that the facility location is not within 250 metres of an archaeological site.</li> <li>• The local municipality and upper-tier municipality in which the facility is located, confirming that the facility location is not situated within area identified by the municipality on an archaeological management plan.</li> <li>• Parks Canada, the Ministry of Tourism, Culture and Sport or the local municipality or upper-tier municipality confirming that the facility location is not situated on a property on which a national historical site is located.</li> </ul> <p>It is expected that these confirmations be in the form of written correspondence from the applicable organization that includes a date and contact person.</p> <p>See paragraph 1 of subsection 7 (3) of O. Reg. 350/12.</p> |  |
| <b>Confirmation of Noise Specification Option<br/>(if applicable)</b> | <p>Evidence must be retained that confirms the noise criteria in subsection 3 (3) of O. Reg. 350/12 has been met. Any applicable reports must be prepared by a professional engineer who holds a licence, limited licence or temporary licence under the Professional Engineers Act, or a person working under a professional engineer within the same meaning.</p> <p><b>Note:</b> This record is required only if the facility did not meet the criterion set out in paragraph 6 subsection 3 (2) of O. Reg. 350/12.</p>   | During the life of the solar facility. |
| <b>Environmental Site Assessment<br/>(if applicable)</b>              | <p>An environmental site assessment must demonstrate that the concentration of a contaminant in the soil at the property exceeds the applicable subsurface soil standard set out in Table 5 of the Soil, Ground Water and Sediment Standards that is applicable to the use for which the property is zoned. See paragraph 3 of subsection 7 (3) of O. Reg. 350/12.</p> <p><b>Note:</b> This record is required only if the facility location is on property zoned for industrial, commercial or institutional use and meets the criterion set out in subparagraph 1 ii of subsection 3 (4) of O. Reg. 350/12.</p>  | During the life of the solar facility. |

## Appendix A: Complaint Record Sample Template

Company: \_\_\_\_\_  
Date MOE District Office Manager  
Notified of Complaint:<sup>2</sup> \_\_\_\_\_

Date/Time of Complaint: \_\_\_\_\_  
Name of Complainant: \_\_\_\_\_

Prepared By: \_\_\_\_\_

Complainant Contact Info: \_\_\_\_\_

|   |
|---|
| <b>Description of complaint</b>   |
| Complaint received via correspondence: <input type="checkbox"/> (attach copy of correspondence to this record and leave this section blank)   |
| <b>Summary of measures taken to address complaint</b>   |
| Complainant contacted after measures taken? <sup>3</sup> <input type="checkbox"/> (attach a copy of any correspondence exchanged with the complainant in relation to the complaint) |

**Notes:**

1. Use this sheet to record complaints related to the natural environment as required by O. Reg. 350/12.
2. The District Office Manager must be notified no later than two businesses after the complaint was received.
3. While not a regulatory requirement, contacting complainant after measures have been taken is recommended to ensure that the complaint has been resolved.

